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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,376	11/25/2003	Giuseppe Gattavari	853063.505	4615
38106	7590	04/04/2005	EXAMINER	
SEED INTELLECTUAL PROPERTY LAW GROUP PLLC 701 FIFTH AVENUE, SUITE 6300 SEATTLE, WA 98104-7092			RILEY, SHAWN	
			ART UNIT	PAPER NUMBER
			2838	

DATE MAILED: 04/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/722,376	Applicant(s) GATTAVARI ET AL.	
	Examiner Shawn Riley	Art Unit 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 6, 7 and 9 is/are rejected.
- 7) ☒ Claim(s) 2-5, 8 and 10-15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on nov03 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>apr04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION***Drawings***

1. The drawing(s) is(are) objected to because they fail to label (figure(s) 2) what 3 is connected to, i.e., it is connected to 1. further, the boxes (1, 2, 10, 104, 101, 103, line 200, dashed boxes-- 9, 103, 100) need labeling. Without some indication as to the content of the boxes (or preferably ansi symbols of the actual elements) it is not clear as to what the elements are and they are not explanatory to a reader as a quick method of determining the general background of the invention.

See MPEP 608.02 subparagraph (o) -- **Legends**

Suitable descriptive legends may be used, or may be required by the Examiner, where necessary for understanding of the drawing, subject to approval by the Office. They should contain as few words as possible.

The drawing(s) is(are) objected to under 37 CFR 1.83(a) because it(they) fail(s) to show the complete new circuit such as shown in figure 1 (i.e., insert figure 2 into figure one, and call it figure 2b, e.g., to clearly describe the invention) described in the specification. For the cover figure the examiner is only left with the option of showing a 'floating' embodiment of the negative temperature coefficient device or including an additional drawing of the prior art which would look like a printer error since the examiner would like to make the full background of the invention clearly available to a future searcher. Note that even figure 3 describes applicant's new invention as a combination of the prior art figure 1 in combination with the inventive portion of figure 2. As currently illustrated in figures 2 and 4-6, 102 (the mos) has no means of operation, a connection should at least be made to the input of the mos to show that it is

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controlled and not just left off. Further, likewise a drawing of the parallel connected regulators should be shown (as described in claim 9). Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).

Correction is required.

Specification

2. Applicant(s) is(are) reminded of the proper language and format for an abstract of the disclosure.

3. The form and legal phraseology often used in patent claims, such as “**comprises**”, “means”, and “said,” should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details. Correction is required. See MPEP § 608.01(b).

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. Switching regulator with negative temperature compensation.

Claim Rejections - 35 U.S.C. § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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2. Claims 1, 6, and 7 are rejected under 35 U.S.C. §102(b) as being fully anticipated by Isham (U.S. Patent 6,765,372). Isham shows,¹ (in, e.g., the(ir) figure(s) and corresponding disclosure)

As to claim 1;

A switching voltage regulator (see, e.g., figure 1 discussing background of the invention) adapted for providing a regulated voltage at an output terminal, comprising: A MOS transistor (40) having a non-drivable terminal coupled with said output terminal (at node 35); and a control circuit receiving a signal that is representative of the current signal flowing in said MOS transistor (input into 40, from driver 20), said control circuit having a compensation device (see, e.g., element 10 and, e.g., figure 3) adapted for canceling the thermal variation of said signal that is representative of the current signal flowing in said MOS transistor (see, e.g., column 5 lines 13-25).

As to claim 6;

The regulator according to claim 1 wherein said MOS transistor is a MOS power transistor having a non-drivable terminal coupled with an input voltage (VIN), and in that said control circuit comprises a driving device (Driver 20) of said MOS power transistor which is coupled with its gate terminal, a first device (300/220/350/360) which is adapted for detecting the current flowing through said MOS power transistor (controller circuitry

¹ Note claims will be addressed individually and the material in parentheses are the examiner's annotated comments. Further unless needed for clarity reasons, recited limitation(s), will be annotated only upon their first occurrence. Annotated claims begin with the phrase "As to claim". Claims that are not annotated are seen as having already had the invention(s) addressed previously in an annotated claim. Bolded words/phrases indicate rejected material based 112 paragraph rejections. Underlined words/phrases indicate objected to material.

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300 in figure 3) and which is able to provide at an output terminal said signal that is representative of the current signal flowing in said MOS transistor, a second device (including 320/330) which is coupled with said first device and which is able to compare said signal in output from said first device with a reference signal (output of 220) and which is able to provide a correction signal to the driving device ($I_{\text{CORRECTED}}$), said compensation device being coupled with the output terminal of the first device and with the output terminal of said voltage regulator.

As to claim 7;

The regulator according to claim 6 wherein said second device is an error amplifier (e.g., 320/330) having the input inverting terminal (332) connected with the output terminal of the first device (350/360 through 370 to node 334) and with the compensation device (connection to circuitry as a whole).

Claim Rejections - 35 U.S.C. § 103

3. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary

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skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

4. Claim 9 is rejected under 35 U.S.C. § 103 as being unpatentable over Isham (U.S. Patent 6,765,372). The Isham reference discloses the limitations of the invention as claimed as described above. However, Isham does not show multiple regulators. It would have been obvious at the time the invention was made to utilize multiple regulator into the circuit of Isham since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art, and it has no patentable significance unless a new and unexpected result is produced, see *In re Harza*, 274F.2d 669, 124 USPQ 378 (CCPA 1960).

Allowable Subject Matter

5. Claims 2-5, 8 and 10-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. As allowable subject matter has been indicated, applicant's response must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 C.F.R. § 1.111(b) and section 707.07(a) of the M.P.E.P.

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7. The following is an examiner's statement of reasons for allowance: No prior art uncovered anticipates or renders obvious applicant(s) claimed invention including the compensation device having a negative coefficient.

Conclusion

Any inquiry from other than the applicant/attorney of record concerning this communication or earlier communications from the Examiner should be directed to the Patent Electronic Business Center (EBC) at 1.866.217.9197. Any inquiry from a member of the press concerning this communication or earlier communications from the Examiner or the application should be directed to the Office of Public Affairs at 703.305.8341. Any inquiry from the applicant or an attorney of record concerning this communication or earlier communications from the Examiner should be directed to Examiner Riley whose telephone number is 571.272.2083. The Examiner can normally be reached Monday through Thursday from 7:30-6:00 p.m. Eastern Standard Time. The Examiner's Supervisor is Mike Sherry who can be reached at 571.272.2084. Any inquiry about a case's location, retrieval of a case, or receipt of an amendment into a case or information regarding sent correspondence to a case **should be directed to 2800's Customer Service Center** at 571.272.2815. Any papers to be sent by fax MUST BE sent to fax number 703.872.9306. Any inquiry of a general nature of this application should be **directed to the Group receptionist** whose telephone number is 571.272.2800. Status information of cases may be found at <http://pair-direct.uspto.gov> wherein unpublished application information is found through private PAIR and published application information is found through public PAIR. Further help on using the PAIR system is available at 1.866.217.9197 (Electronic Business Center).

March 05



Shawn Riley
Primary Examiner